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(12) United States Patent  
Brugliera et al.(10) Patent No.: US 6,774,285 B1  
(45) Date of Patent: Aug. 10, 2004(54) NUCLEIC ACID SEQUENCES ENCODING  
FLAVONOID 3'-HYDROXYLASE AND  
METHODS OF ALTERING FLOWER COLOR  
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C12N 15/29; C12N 15/52; C12N 15/82(52) U.S. Cl. ..... **800/298**; 435/320.1; 536/23.2;  
536/23.6; 800/282(58) Field of Search ..... 435/69.1, 320.1,  
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## (57) ABSTRACT

The present invention relates generally to nucleic acid sequences encoding flavonoid 3'-hydroxylase (hereinafter referred to as “F3'H”) and their use in the manipulation of pigmentation in flowers of plants.